

Estimated Setback Distances as a Function of Asphalt Throughput and Plant Characteristics

Asphalt Plant Operational Parameters	Setback Distance in Feet (governing pollutant) Based Upon Example Daily HMA Throughputs ^b		
	1,500 ton/day ^b	3,600 ton/day ^b	9,600 ton/day ^b
Asphalt Plant Can Be Operated State Wide Portable (Using Worst-Case Meteorological Data)^a			
Asphalt plant - 200 ton/hr maximum throughput <ul style="list-style-type: none"> Ultra-low sulfur (0.0015 % by weight) fuel use in drum dryer with IC engines powering electrical generators 	820 ft (NO ₂)	820 ft (NO ₂)	1,310 ft (PM _{2.5})
Asphalt plant - 200 ton/hr maximum throughput <ul style="list-style-type: none"> Ultra-low sulfur (0.0015 % by weight) fuel use in drum dryer without IC engines powering electrical generators 	260 ft (PM _{2.5})	560 ft (PM ₁₀)	1,310 ft (PM _{2.5})
Asphalt plant - 200 ton/hr maximum throughput <ul style="list-style-type: none"> High sulfur (0.5 % by weight) fuel use in drum dryer with IC engines powering electrical generators 	820 ft (NO ₂)	820 ft (NO ₂)	1,310 ft (PM _{2.5})
Asphalt plant - 200 ton/hr maximum throughput <ul style="list-style-type: none"> High sulfur (0.5 % by weight) fuel use in drum dryer without IC engines powering electrical generators 	260 ft (PM _{2.5})	560 ft (PM ₁₀)	1,310 ft (PM _{2.5})
Asphalt plant - 400 ton/hr maximum throughput <ul style="list-style-type: none"> Ultra-low sulfur (0.0015 % by weight) fuel use in drum dryer with IC engines powering electrical generators 	980 ft (NO ₂)	980 ft (NO ₂)	1,310 ft (PM _{2.5})
Asphalt plant - 400 ton/hr maximum throughput <ul style="list-style-type: none"> Ultra-low sulfur (0.0015 % by weight) fuel use in drum dryer without IC engines powering electrical generators 	300 ft (NO ₂)	560 ft (PM ₁₀)	1,310 ft (PM _{2.5})
Asphalt plant - 400 ton/hr maximum throughput <ul style="list-style-type: none"> High sulfur (0.5 % by weight) fuel use in drum dryer with IC engines powering electrical generators 	980 ft (NO ₂ , SO ₂)	980 ft (NO ₂ , SO ₂)	1,310 ft (PM _{2.5})
Asphalt plant - 400 ton/hr maximum throughput <ul style="list-style-type: none"> High sulfur (0.5 % by weight) fuel use in drum dryer without IC engines powering electrical generators 	980 ft (NO ₂)	980 ft (NO ₂)	1,310 ft (PM _{2.5})

^a For the scenarios involving operation of diesel-fired IC engines powering electrical generators, the following parameters were used:

- 1) One large 1,350 bhp, EPA Tier 2 certified, IC engine with maximum operation up to 16 hr/day;
- 2) One small 200 bhp, EPA Tier 2 certified, IC engine with maximum operation up to 24 hr/day (when the larger engine is not operating);
- 3) Both engines use 0.0015% by weight sulfur diesel fuel;
- 4) A 13 ft. high stack for both IC engines (from ground level) was used.

^b The throughputs listed in the table are examples. The setback distances can be linearly interpreted to determine an estimated setback for different throughputs than what is listed. The actual throughputs proposed by the Applicant will be used to set specific setback distances in the permit.

Estimated Setback Distances as a Function of Asphalt Throughput and Plant Characteristics

Asphalt Plant Operational Parameters	Setback Distance in Feet (governing pollutant) Based Upon Example Daily HMA Throughput ^b		
	1,500 ton/day ^b	3,600 ton/day ^b	9,600 ton/day ^b
Asphalt Plant Operation Limited to a Specific Location (Using “Pseudo” Site-Specific Meteorological Data)^c			
Asphalt plant - 200 ton/hr maximum throughput <ul style="list-style-type: none"> Ultra-low sulfur (0.0015 % by weight) fuel use in drum dryer with IC engines powering electrical generators 	300 ft (NO ₂)	430 ft (PM ₁₀)	900 ft (PM _{2.5})
Asphalt plant - 200 ton/hr maximum throughput <ul style="list-style-type: none"> Ultra-low sulfur (0.0015 % by weight) fuel use in drum dryer without IC engines powering electrical generators 	160 ft (All)	430 ft (PM ₁₀)	820 ft (PM _{2.5})
Asphalt plant - 200 ton/hr maximum throughput <ul style="list-style-type: none"> High sulfur (0.5 % by weight) fuel use in drum dryer with IC engines powering electrical generators 	300 ft (NO ₂)	430 ft (PM ₁₀)	900 ft (PM _{2.5})
Asphalt plant - 200 ton/hr maximum throughput <ul style="list-style-type: none"> High sulfur (0.5 % by weight) fuel use in drum dryer without IC engines powering electrical generators 	160 ft (All)	430 ft (PM ₁₀)	820 ft (PM _{2.5})
Asphalt plant - 400 ton/hr maximum throughput <ul style="list-style-type: none"> Ultra-low sulfur (0.0015 % by weight) fuel use in drum dryer with IC engines powering electrical generators 	590 ft (NO ₂)	590 ft (NO ₂)	900 ft (PM _{2.5})
Asphalt plant - 400 ton/hr maximum throughput <ul style="list-style-type: none"> Ultra-low sulfur (0.0015 % by weight) fuel use in drum dryer without IC engines powering electrical generators 	160 ft (All)	430 ft (PM ₁₀)	820 ft (PM _{2.5})
Asphalt plant - 400 ton/hr maximum throughput <ul style="list-style-type: none"> High sulfur (0.5 % by weight) fuel use in drum dryer with IC engines powering electrical generators 	590 ft (NO ₂)	590 ft (NO ₂)	900 ft (PM _{2.5})
Asphalt plant - 400 ton/hr maximum throughput <ul style="list-style-type: none"> High sulfur (0.5 % by weight) fuel use in drum dryer without IC engines powering electrical generators 	160 ft (All)	430 ft (PM ₁₀)	820 ft (PM _{2.5})

^b For the scenarios involving operation of diesel-fired IC engines powering electrical generators, the following parameters were used:

- 1) One large 1,350 bhp, EPA Tier 2 certified, IC engine with maximum operation up to 16 hr/day;
- 2) One small 200 bhp, EPA Tier 2 certified, IC engine with maximum operation up to 24 hr/day (when the larger engine is not operating);
- 3) Both engines use 0.0015% by weight sulfur diesel fuel;
- 4) A 13 ft. high stack for both IC engines (from ground level) was used.

^b The throughputs listed in the table are examples. The setback distances can be linearly interpreted to determine an estimated setback for different throughputs than what is listed. The actual throughputs proposed by the Applicant will be used to set specific setback distances in the permit.

^c Analyses were performed using meteorological data collected in Boise. Use of data from other areas could result in setback distances that are somewhat greater or smaller (but likely less than those associated with the worst-case conditions used for a state-wide portable permit).